

8007
APPROPRIATE TO 28 MAR 2006**METHOD AND DEVICE FOR CONTROLLING AN INTERNAL COMBUSTION
ENGINE**OK to enter the
Substitute Specification

ES 03/23/2008

CROSS REFERENCE TO RELATED APPLICATIONS

[0001] This application is the US National Stage of International Application No. PCT/EP2004/052016, filed September 2, 2004 and claims the benefit thereof. The International Application claims the benefits of German Patent application No. 10344759.8 filed September 26, 2003. All of the applications are incorporated by reference herein in their entirety.

FIELD OF THE INVENTION

[0002] The invention relates to a method and device for controlling an internal combustion engine comprising an intermittent charge valve which is disposed in an intake tube.

BACKGROUND OF THE INVENTION

[0003] From DE 102 00 533 A1 a method and a device for controlling an internal combustion engine are known. The internal combustion engine has a manifold from which an intake tube extends to an intake of a cylinder of the internal combustion engine. A gas inlet valve is disposed at the intake of the cylinder. An intermittent charge valve is disposed upstream of the gas inlet valve in the intake tube. The intake tube is open or closed, depending on the switching position of the intermittent charge valve. Furthermore, an injection valve is provided which meters the fuel. The rapidly switching intermittent charge valves which are assigned to each cylinder are closed during the first section of the intake sequence so that a high negative pressure can build up. After approximately half of the intake sequence, the intermittent charge valve – the rapidly switching cross-sectional switch – is opened suddenly so that the negative pressure generated in the cylinder during the first section of the intake sequence generates a very high velocity of flow of the intake air/fuel mixture. The intake air column flowing very rapidly in to the combustion chamber of the cylinder of the internal combustion engine produces, in the range of low to moderate revolutions of the internal combustion engine, significant supercharging effects because of the better filling characteristics of the respective combustion chamber.

[0004] More stringent legal provisions with regard to the emissions, especially